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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,328	10/31/2003	Joseph A. Brotherton	6251	9447

7590 12/03/2004

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EXAMINER

BUTLER, DOUGLAS C

ART UNIT PAPER NUMBER

3683

DATE MAILED: 12/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/697,328

Applicant(s)

BROTHERTON ET AL. *ST*

Examiner

Douglas C. Butler

Art Unit

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hester et al(US6321886), alone, or in the alternative Hester et al(US6321886), in view of submitted Carmel et al(4986149) reference or Schrader et al(3889786) or Wakisaka et al(US6253883) or Koike et al(US2004/0026189A1).

Each one of the claims recites a squealer band for a brake drum wherein material of the band is removed in order to form a section with "continually varying thickness" which facilitates the balancing of the brake drum.

Hester et al disclose making two constant depth cuts to remove portions of squealer band but does not appear to teach removing material to form a section with "continually varying thickness" which facilitates the balancing of the brake drum.

With Hester et al alone, it would have been obvious at the time the invention was made to one having ordinary skill in the art to which the invention pertains to modify the

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principal reference to Hester et al to remove portions of the squealer band material as desired such as by removing material to obtain a continuously variable thickness in order to promote balance, heat distribution, cooling and vibration dampening. One having ordinary skill in the brake drum art through routine trial and error would appreciate that balancing of a brake drum is accomplishing by removing material or adding balance weights as needed in order to achieve balancing and vibration dampening. The particular amount and nature of material removal is not critical as to the specific cross-section of the remaining material.

Considering the alternative rejection, note that each one of the secondary references to Schrader et al(3889786), Wakisaka et al(US6253883) and Koike et al(US2004/0026189A1) teaches providing grooves(i.e., removing material from a brake drum) to facilitate balance, heat distribution, cooling and vibration dampening. I

Carmel et al teach removing sections of the squealer band as desired to balance the braked drum.

It would have been obvious at the time the invention was made to one having ordinary skill in the art to which the invention pertains to modify the principal reference to Hester et al to remove portions of squealer band as desired such as by removing material to obtain a variable thickness in order to promote balance, heat distribution, cooling and vibration dampening as taught by each of the secondary references to Carmel et al, Schrader et al(3889786), Wakisaka et al(US6253883) and Koike et al(US2004/0026189A1). One having ordinary skill in the brake drum art through routine trail and error would appreciate that balancing of a brake drum is accomplishing by

removing material or adding balance weights as needed in order to achieve balancing and vibration dampening. The particular amount and nature of material removal is not critical as to the specific cross-section of the remaining material.

4. Applicant's arguments filed 09/27/2004 have been fully considered but they are not persuasive for the above reasons. The instant specification does not state that the particular shape of the section of squealer band material removed is critical. In the absence of some evidence or statement in the specification that the particular shape is critical, it would have been obvious at the time the invention was made to one having ordinary skill in the art to which the invention pertains to modify the shape of the removed material as desired through routine trial and error and/or experimentation to properly balance the brake drum since such modifications would have involved changes within the ability of an artisan in the art in order to arrive at the optimum balance based upon the brake drum and its state. It is well known in balancing brake drums and brake rotors to remove material where and as necessary to arrive at the best possible balance to ensure proper operation during braking.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

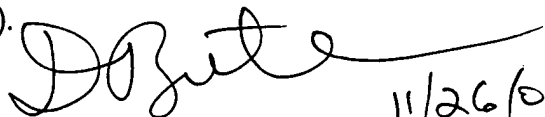
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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas C. Butler whose telephone number is 703-308-2575. The examiner can normally be reached on m-f 5:30 am to 2pm.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Douglas C. Butler  
Primary Examiner  
Art Unit 3683

11/26/04

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